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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/981,654	01/08/1998	YASUSHI KANEKO	971480	8315

23850 7590 06/04/2003

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EXAMINER

NGUYEN, DUNG T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
08/981,654

Applicant(s)

Kaneko et al.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on May 5, 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above, claim(s) 4-18 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 and 3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) The translation of the foreign language provisional application has been received.

- 15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

- 4) Interview Summary (PTO-413) Paper No(s). _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/05/2003 has been entered.
2. Applicant's amendment filed 04/07/2003 has been received and entered.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al., US Patent No. 4,634,229 , in view of Natsunaga, US Patent No. 5,548,423, as stated in the office action 11/19/2001.

Regarding claim 1, Amstutz et al., figure 1, disclose a liquid crystal display (LCD) apparatus having:

- A pair of transparent substrates (1, 2), each having parallel strips of electrode layers (6, 7);

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- A super twist nematic liquid crystal (5) is sandwiched between the pair of substrates (1, 2), wherein the total twisted angle (ϕ) of liquid crystal molecules is between 180° and 360°;
- A pair of polarizers (10, 11) is disposed to the outside of the pair of substrates (1, 2), wherein the polarizers having absorption axes which are orthogonal to each other and the absorption axes inherently being angled 50° respect to a direction of the orientation of liquid crystal molecules in an intermediate portion in a direction of thickness of the liquid crystal layer (i.e., $\phi = 190^\circ$, $\beta = 45^\circ$, $\gamma = 45^\circ$ and $\beta + \gamma = 90^\circ$).

Amstutz et al. do not disclose the LCD can be driven by applying a voltage of 10 to 20V. However, Natsunaga does disclose that drive region can be in the range of V_L (3 to 5V) to V_M (30 to 40V) (figure 9). Therefore, such disclosed range in Natsunaga makes possible the claimed range of 10V to 20V overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

Regarding claim 3, although Amstutz et al. do not disclose the value of $\Delta n.d$ that lies within a range of 600 to 900nm, Amstutz et al. do disclose the range of 800 to 1200nm for the $\Delta n.d$ (claim 6). Therefore, such disclosed range in Amstutz et al. makes possible the claimed range of 600 to 900nm and overlapping ranges are at least obvious. *In re Malagari*, 499 Fed.2d 1297, 182 USPQ 549 CCPA 1974.

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Response to Arguments

5. Applicant's arguments filed 04/07/2003 have been fully considered but they are not persuasive as follows:

Regarding claim 1, Applicants contend that the value of $\beta + \gamma$ is not simply a crossed angle of absorption axes of a pair of polarizing plates (amendment, page 3). The Examiner respectfully disagrees with the Applicants' viewpoint and respectfully invited the Applicants to review the Amstutz et al. reference (col. 6, lines 48-60) in which Amstutz et al. clearly disclose the relationship of β and γ satisfied $\beta + \gamma = 90^\circ$.

In addition, Applicants also contend that the feature of "setting a range of angle of directions of the absorption axes the respective polarizing plates and intermediate liquid crystal molecules of a liquid crystal device within ± 40 degrees to ± 50 degrees (amendment, page 4). It should be noted that, as stated above, the absorption axes inherently being angled 50° respect to a direction of the orientation of liquid crystal molecules in an intermediate portion in a direction of thickness of the liquid crystal layer in case of twisted angle $\phi = 190^\circ$, and $\beta = 45^\circ$, $\gamma = 45^\circ$.

Lastly, Applicants contend that a combination of Amstutz et al. and Natsunaga do not suggest the invention set forth in claim 1 (amendment, page 4). Applicants is noted that Amstutz et al. do disclose all conditions stated in claims 1 as notes above; therefore, such combination of Amstutz et al. and Natsunaga would meet the limitation of claim 1.

Accordingly, the rejection of claims 1 and 3 stand.

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Conclusion

6. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The Examiner can normally be reached on Monday-Thursday

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If attempts to reach the Examiner by telephone are unsuccessful, The Examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7730 for regular communications and 703-308-7726 for After Final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

DN
06/02/2003

